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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/773,695

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David Dunlap

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EXAMINER

CRABTREE, JOSHUA DAVID

ART UNIT

PAPER NUMBER

3715

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/773,695

Applicant(s)

DUNLAP ET AL.

Examiner

Joshua D. Crabtree

Art Unit

3715

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/1/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claim 1, 5, 9, 12, 24, 25, 28, 32, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pella et al. in view of Lewis et al. (US 5,059,127).** Pella et al. disclose a method of teaching a language to a user through a three dimensional learning environment (Col. 1: 45-61).

With regard to claims 1 and 24, Pella et al. disclose a computer system having a central processing unit with associated memory and storage means, at least one input device, audio output means, audio input means and means for visual display (Fig. 1).

With regard to the limitation of a means for presenting visual images of a simulated village model on the visual display, the image in the model having positional dependence on control through the input device by a learner, the village model including objects and characters, Pella et al. disclose presenting a three-dimensional virtual environment in which a user may navigate via input controls (Fig. 3; Col. 1: 45-61). The environment may include models of persons and objects (Col. 6: 31-35). With

regard to modeling a village, Pella et al. disclose that a small town may be modeled (Col. 4: 7-14).

With regard to the limitation of a means for monitoring position induced by the control input for proximity to a character in the model, Pella et al. disclose that when a user encounters a virtual character, the character interacts with the user (Col. 1: 55-61; Col. 4: 41-64). Pella et al. disclose that proximity to a character may be treated the same way as clicking on a character, to begin interaction (Col. 9: 51-54).

With regard to the limitations of a means for prompting a statement from the character audible through the audio output means, and accepting verbal input from the learner through the audio input means, Pella et al. disclose that when the user encounters a virtual character, a conversation takes place between the user and the character, via audio input and output means (Col. 4: 49-64; Col. 9: 38-57).

With regard to the limitations of comparing the verbal input to a set of anticipated learner responses, and determining a skill level of the learner based on an output from the comparing means, Pella et al. disclose that the character may ask the user a question, and then analyze the user's verbal response. The system compares the user's verbal answers with "model answers", or anticipated responses, in order to analyze the user's progress through the lessons. The system determines a user's skill level by tracking correct and incorrect responses (Col. 4: 49 – Col. 5: 12; Col. 8: 55-63; Col. 11: 3-16).

With regard to the limitations of a means for selecting a new character response based on the skill level of the learner, and presenting the new character response as an audible statement from the character through the audio output means, Pella et al. disclose a step wherein the user is presented with the same question again if the user gave the wrong answer. If the user gives the right answer, then an approval video is played, and a different question is asked by the character (Item 716 in Fig. 7; Col. 10: 40-60). Pella et al. do not explicitly disclose selecting new character response based on the skill level of the learner. Lewis et al. teach an adaptive testing system wherein each question presented to a student is based on current estimated skill level (Col. 8: 53-56). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Lewis et al. into the invention of Pella et al. in order to provide a learning system in which the user is presented with question items which vary in difficulty according to the user's demonstrated skill level.

With regard to claims 2 and 25, and the limitation of a means for monitoring the control input for designation of an object in the model, Pella et al. disclose that the user may click on a selected object (Col. 4: 62-64).

With regard to claim 2-4, 10, 11, 26, 27, 33, and 34, and the limitation of a means for providing a selected output in the target language descriptive of the object responsive to a designation, wherein the output is an audible verbalization of the name of the object in the target language (in claims 3, 10, 26, and 33), and a text display of the

name of the object in the target language (in claims 4, 11, 27, and 34), Pella et al. disclose these features (Col. 1: 34-39; Speaker in Fig. 1 for audio output).

With regard to claims 5, 12, 28, and 36, and the limitation of a means for monitoring an additional control input, Pella et al. disclose that input devices may include a mouse, pointing device, joystick, game pad, scanner or satellite dish (Col. 3: 30-34). With regard to a means for providing an audible verbal output of the name of the object displayed in the text, Pella et al. disclose this feature (Col. 1: 34-39).

With regard to claim 9, Pella et al. disclose a computer system having a display (Item 47 in Fig. 1).

With regard to claim 9 and 32, and the limitation of a means for presenting visual images of a simulated village model on the display having positional dependence on a control input from a learner, the village model including objects and characters, Pella et al. disclose presenting a three-dimensional virtual environment in which a user may navigate via input controls (Fig. 3; Col. 1: 45-61). The environment may include models of persons and objects (Col. 6: 31-35). With regard to modeling a village, Pella et al. disclose that a small town may be modeled (Col. 4: 7-14).

With regard to the limitation of a means for monitoring position induced by the control input, Pella et al. disclose that when a user encounters a virtual character, the character interacts with the user (Col. 1: 55-61; Col. 4: 41-64).

With regard to a means for monitoring the control input for designation of an object in the model, Pella et al. disclose that the user may click on a selected object (Col. 4: 62-64).

With regard to a means for providing a selected output in the target language descriptive of the object responsive to a designation, Pella et al. disclose this (Col. 1: 34-39).

2. **Claims 6, 13, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pella et al. in view of Lewis, as applied above, and further in view of Fisher (US 2001/0041328).**

With regard to claims 6 and 13, and a means for comparing the text input to the target language name of the object, Pella et al. disclose that a speech recognizer may convert the user's responses into text before being analyzed as correct or incorrect (Col. 9: 6-19).

With regard to a means for determining a skill level of the learner based on the comparison, Pella et al. disclose that the invention keeps a score in order to determine the user's level of comprehension (Col. 5: 9-12; Col. 11: 3-16).

Pella et al. disclose that the user may enter commands and information through a keyboard (Col. 3: 31-34). Pella et al., as modified by Lewis, do not expressly disclose a means for accepting a text input into a text input box. Fisher teaches a foreign language immersion simulation process and apparatus wherein a user may interact in a virtual environment via entering text into a text box (Fig. 1b; Paragraph [0020], [0028]). It

would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Fisher into the invention of Pella et al., as modified by Lewis, in order to provide an immersive language teaching simulation in which the user interacts via text. This would help to teach writing skills, as well as verbal skills, in relation to the target language.

3. Claims 7, 8, 15, 18, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pella et al. in view of Lewis, as applied above, and further in view of Bishop (US 5,810,599), and further in view of Styles (US 2004/0018478).

With regard to claims 7, 8, 15, 18, 30, 31, and 40, Pella et al., as modified by Lewis, do not disclose a means for displaying the audible statement from the character as first text, and means for displaying anticipated learner responses as second text (as recited in claims 7, 15, and 30), and means for accepting selection of the second text of one of the anticipated responses by a control input of the learner, means for accepting the new character response based on the selected text response (as recited in claims 8, 18, 31, and 40). Bishop teaches an interactive audio-visual foreign language skills maintenance system wherein the user may interact via text in a role-playing embodiment (Col. 9: 54 – Col. 10:18). With regard to displaying the audible statement from the character as first text, Bishop teaches presenting the user, in textual form, the question, or dialog, to which the user is to respond (Col. 10: 10-15). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Bishop into the invention of Pella et al., as modified by Lewis, in order to

allow the viewer to see the question in text form. This would assist the user in learning how to read, as well as speak, the target language.

Pella et al., as modified by Lewis and Bishop, do not disclose means for displaying anticipated learner responses as a second text, and means for accepting selection of the second text of one of the anticipated responses by a control input of the learner, and Styles teaching a method for video interaction with a character in which possible user responses are presented as text. After the user selects a response, the system determines a subsequent character response to the user's response (Fig. 2; Paragraph [0031 - 0032], [0040 - 0047]). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Styles into the invention of Pella et al., as modified by Lewis and Bishop, in order to allow the user to view possible responses to questions in text form, for selection by the user. This would present a "multiple choice" type of testing situation, which would allow the user to compare various possible answers before choosing the correct one.

With regard to means for accepting the new character response based on the selected text response, Pella et al. disclose a method step wherein a new character response is presented if the user correctly answered the previous question. Therefore, the new character response is based upon the user's previous answer. With regard to a means for presenting the new character response as an audible statement from the character, Pella et al. disclose audible output from the character, as described above.

With regard to claims 15 and 37, Pella et al. disclose a computer system having a central processing unit with associated memory and storage means, at least one input device, audio output means, audio input means and means for visual display (Fig. 1).

With regard to the limitation of a means for presenting visual images of a simulated village model on the visual display, the image in the model having positional dependence on control through the input device by a learner, the village model including objects and characters, Pella et al. disclose presenting a three-dimensional virtual environment in which a user may navigate via input controls (Fig. 3; Col. 1: 45-61). The environment may include models of persons and objects (Col. 6: 31-35). With regard to modeling a village, Pella et al. disclose that a small town may be modeled (Col. 4: 7-14). Pella et al., as modified by Lewis, do not disclose the features of displaying the audible statement from the character as first text, means for displaying anticipated learner responses as second text. Pella et al., as modified by Lewis, Bishop and Styles, teach this feature, as described above.

With regard to claims 16 and 38, Pella et al., as modified by Lewis, do not disclose a means for playing an audio representation of a chosen portion of the first text responsive to a first control input and means for playing an audio representation of a chosen portion of the second text responsive to a second control input. Bishop teaches playing an audio representation of text, while displaying the text (Col. 10: 10-15). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Bishop into the invention of Pella et al., as modified by

Lewis, in order to allow the user to view text while hearing the text as well. This would assist the learner in learning the spelling, as well as pronunciation, of a target language.

With regard to claims 17 and 39, Pella et al. disclose a means for accepting a verbal input from the learner (microphone in Fig. 1). With regard to the limitations of comparing the verbal input to a set of anticipated learner responses, and determining a skill level of the learner based on an output from the comparing means, Pella et al. disclose that the character may ask the user a question, and then analyze the user's verbal response (Col. 4: 49 – Col. 5: 12; Col. 8: 55-63). The system compares the user's verbal answers with "model answers", or anticipated responses, in order to analyze the user's progress through the lessons. The system determines a user's skill level by tracking correct and incorrect responses (Col. 4: 49 – Col. 5: 12; Col. 8: 55-63; Col. 11: 3-16).

With regard to the limitations of a means for selecting a new character response based on the skill level of the learner, and presenting the new character response as an audible statement from the character through the audio output means, Pella et al. disclose a step wherein the user is presented with the same question again if the user gave the wrong answer. If the user gives the right answer, then an approval video is played, and a different question is asked by the character (Item 716 in Fig. 7; Col. 10: 40-60).

With regard to the limitation of a means for monitoring position induced by the control input for proximity to a character in the model, Pella et al. disclose that when a

user encounters a virtual character, the character interacts with the user (Col. 1: 55-61; Col. 4: 41-64). Pella et al. disclose that proximity to a character may be treated the same way as clicking on a character, to begin interaction (Col. 9: 51-54).

With regard to the limitations of a means for prompting a statement from the character audible through the audio output means, and accepting verbal input from the learner through the audio input means, Pella et al. disclose that when the user encounters a virtual character, a conversation takes place between the user and the character, via audio input and output means (Col. 4: 49-64; Col. 9: 38-57).

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pella et al. in view of Lewis, as applied above, and further in view of Spector (US 6,830,452).

With regard to claim 14, and the limitation of a means for accepting verbal input by the learner, Pella et al. disclose a microphone for verbal input (Item 43 in Fig. 1). With regard to a means for comparing the verbal input to the target language name of the object, and means for determining skill level of the learner based on the comparison, Pella et al. disclose these features (Col. 1: 62 – Col. 2: 5; Col. 8: 55-63). Pella et al., as modified by Lewis, do not disclose output of a question mark displayed on the display. Spector teaches a computer training system with audible answers to spoken questions, wherein a question mark may be displayed. The user may click on the question mark in order to pose a question (Col. 6: 35-48). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Spector into the

invention of Pella et al., as modified by Lewis, in order to provide the user with a visual cue, such as a question mark, which the user may click on the initiate verbal interaction.

5. Claims 19, 21, 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pella et al. in view of Leis, as applied above, and further in view of Grayson (US 2006/0127871).

With regard to claims 19 and 41, Pella et al. disclose selecting statements for the character based on whether or not the user has correctly responded (Col. 10: 40 - Col. 11: 16). Pella et al. do not disclose a means for determining a base skill level, and wherein the prompting means selects the statement for the character responsive to the skill level determined. Grayson teach a system for teaching, wherein a student's skill level is determined, and the lessons presented are based on the determined level (Paragraph [0008]). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Fisher into the invention of Pella et al. in order to provide an adaptive manner of testing the user's skill with respect to the target language.

With regard to claims 21 and 43, and the limitation wherein the means for determining a base skill level comprises means for establishing response rate based on a proportion of the number of correct words from a nearest one of the anticipated learner responses present in the verbal input from the learner, Pella et al. disclose scoring the user's performance, based on the number of correct responses provided (Col. 1: 62 - Col. 2: 4; Col. 5: 9-12).

6. Claims 20 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pella et al. in view of Lewis and Grayson, as applied above, and further in view of Chen (US 5,087,205).

With regard to claim 20 and 42, Pella et al., as modified by Lewis and Grayson, do not disclose a means for measuring response time of verbal input received by the accepting means. Chen teaches an interactive audio training system in which the user's performance is measured according to verbal response times. Chen teaches that this feature offers the advantage of making the invention able to adapt the training material to different levels of user proficiency (Col. 1: 60 – Col. 2: 2). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Chen into the invention of Pella et al., as modified by Lewis and Grayson, in order to provide the aforementioned advantage.

7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pella et al. in view of Grayson, as applied above, and further in view of Chang et al. (US 2003/0130836).

With regard to claim 22, Pella et al., as modified by Grayson, do not disclose a means for determining base skill level comprising means for establishing vocabulary knowledge of the learner. Chang et al. teach an evaluation system wherein a user's vocabulary level is determined before subsequent learning material is presented. Chang et al. teach that this offer the advantage of only presenting vocabulary words with which the user is unfamiliar (Paragraph [0008]). It would have been obvious to one of

ordinary skill in the art at the time of invention to incorporate the teaching of Chang et al. into the invention of Pella et al., as modified by Lewis and Grayson, in order to provide the aforementioned advantage.

8. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pella et al. in view of Lewis, Grayson and Chen, as applied above, further in view of Chang et al., and further in view of Sheppard, II (US 5,820,386).

With regard to claim 23, and a means for establishing response rate based on a proportion of the number of correct words from a nearest one of the anticipated learner responses present in the verbal input from the learner, Pella et al. disclose scoring the user's performance, based on the number of correct responses provided (Col. 1: 62 - Col. 2: 4; Col. 5: 9-12).

Pella et al., as modified by Lewis and Grayson, do not disclose means for measuring response time of the verbal input received by the accepting means. Chen teaches this feature, as described above.

Pella et al., as modified by Lewis, Grayson and Chen, do not disclose establishing vocabulary knowledge of the learner. Chang et al. teach an evaluation system wherein a user's vocabulary level is determined before subsequent learning material is presented. Chang et al. teach that this offer the advantage of only presenting vocabulary words with which the user is unfamiliar (Paragraph [0008]). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Chang

et al. into the invention of Pella et al., as modified by Lewis, Grayson, and Chen, in order to provide the aforementioned advantage.

Pella et al. disclose establishing a skill level score based on the response rate, or number of correct responses given (Col. 1: 62 – Col. 2: 4; Col. 5: 9-12).

Pella et al., as modified by Lewis and Grayson, do not disclose establishing a skill level score based on response time. Chen teaches measuring a user's performance based on verbal input response time, as described above.

Pella et al., as modified by Lewis, Grayson, Chen, and Chang et al., do not disclose establishing a skill level score using the means for establishing vocabulary knowledge. Sheppard, II teaches an interactive educational system in which the user takes a vocabulary test and receives a score (Col. 10: 61 – Col. 11: 7). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Sheppard, II into the invention of Pella et al., as modified by Grayson, Chen, and Chang, in order to provide a language instruction system in which the user is tested over vocabulary words in the target language.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Beck (US 2005/0154594) teaches a method and apparatus for teaching speech.

Johnson et al. (US 7,052,278) teach an automated language acquisition system and method.

Marmorstein et al. (US 2005/0048449) teach a system and method for language instruction.

Ogilvie (US 2003/0040899) teaches a system for incremental immersion in a foreign language text.

Willetts (US 5,010,495) teaches a method and system for acquiring a foreign language.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D. Crabtree whose telephone number is 571-272-8962. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert P. Olszewski can be reached on (571) 272-6788. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jc

Joshua D. Crabtree
September 13, 2006

Kathleen Mosser
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